

AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1 to 16. (Canceled).

17. (Currently Amended) A fuel-cell system, comprising:
a reformer unit configured to produce hydrogen from a raw material;
a fuel-cell unit disposed downstream of the reformer unit and operable in accordance with the hydrogen produced by the reformer unit;
an oxidation device configured to convert carbon monoxide into carbon dioxide and disposed between the reformer unit and the fuel-cell unit; and
a water-injection device disposed at the oxidation device and configured to inject water into the oxidation device to supply oxygen to the oxidation device to convert carbon monoxide into carbon dioxide.

18. (Currently Amended) A fuel-cell system comprising:
a reformer unit configured to produce hydrogen from a raw material;
a fuel-cell unit disposed downstream of the reformer unit and operable in accordance with the hydrogen produced by the reformer unit;
an oxidation device configured to convert carbon monoxide into carbon dioxide and disposed between the reformer unit and the fuel-cell unit; and
a water-injection device disposed at the oxidation device and configured to inject water into the oxidation device to supply oxygen to the oxidation device to convert carbon monoxide into carbon dioxide;
wherein the fuel-cell system includes a drive system of a motor vehicle.

19. (Previously Presented) The fuel-cell system according to claim 17, wherein the raw material includes a liquid raw material.

20. (Currently Amended) A fuel-cell system comprising:
a reformer unit configured to produce hydrogen from a raw material;

a fuel-cell unit disposed downstream of the reformer unit and operable in accordance with the hydrogen produced by the reformer unit;

an oxidation device configured to convert carbon monoxide into carbon dioxide and disposed between the reformer unit and the fuel-cell unit; and

a water-injection device disposed at the oxidation device and configured to inject water into the oxidation device to supply oxygen to the oxidation device to convert carbon monoxide into carbon dioxide;

wherein the reformer unit includes a mixer configured to mix the raw material and an oxygen-containing substance.

21. (Previously Presented) The fuel-cell system according to claim 20, wherein the oxygen-containing substance includes at least one of water and air.

22. (Previously Presented) The fuel-cell system according to claim 17, further comprising a two-stage compressor configured to supply compressed air to at least one of a process gas between the oxidation device and the fuel-cell unit and a cathode of the fuel-cell unit.

23. (Previously Presented) The fuel-cell system according to claim 17, further comprising a water separation device disposed in at least one of an exhaust-gas stream from a cathode of the fuel-cell unit, an exhaust-gas stream from an anode of the fuel-cell unit and a cleaned-gas stream from the oxidation unit, the water separating device being configured to separate the water contained in the corresponding gas and to supply the water to a water-storage device disposed upstream from the reformer unit.

24. (Previously Presented) The fuel-cell system according to claim 23, wherein the water separation device includes a condenser.

25. (Previously Presented) The fuel-cell system according to claim 23, further comprising a water circulation loop configured to cool at least one of the water separation device, the fuel-cell unit, air supplied to a cathode of the fuel-cell unit and air supplied to the reformer unit.

26. (Currently Amended) A fuel-cell system comprising:
a reformer unit configured to produce hydrogen from a raw material;
a fuel-cell unit disposed downstream of the reformer unit and operable in accordance with the hydrogen produced by the reformer unit;
an oxidation device configured to convert carbon monoxide into carbon dioxide and disposed between the reformer unit and the fuel-cell unit;
a water-injection device disposed at the oxidation device and configured to inject water into the oxidation device to supply oxygen to the oxidation device to convert carbon monoxide into carbon dioxide; and
a catalytic burner configured to combust exhaust gas from an anode of the fuel-cell unit and to direct corresponding waste heat through a heat exchanger to the reformer unit.

27. (Previously Presented) The fuel-cell system according to claim 26, wherein the catalytic burner is connected to a supply tank supplying the raw material.

28. (Currently Amended) A fuel-cell system comprising:
a reformer unit configured to produce hydrogen from a raw material;
a fuel-cell unit disposed downstream of the reformer unit and operable in accordance with the hydrogen produced by the reformer unit;
an oxidation device configured to convert carbon monoxide into carbon dioxide and disposed between the reformer unit and the fuel-cell unit;
a water-injection device disposed at the oxidation device and configured to inject water into the oxidation device to supply oxygen to the oxidation device to convert carbon monoxide into carbon dioxide;
an expander disposed in an exhaust-gas stream of a cathode of the fuel-cell unit; and
a compressor disposed in a supply-air stream of the fuel-cell unit;
wherein the expander and the compressor are arranged on a common shaft.

29. (Previously Presented) The fuel-cell unit according to claim 28, wherein the compressor includes a two-stage compressor.

30. (Previously Presented) The fuel-cell unit according to claim 17, wherein the raw material includes a hydrogen-containing substance.

31. (Previously Presented) The fuel-cell unit according to claim 30, wherein the hydrogen-containing substance includes at least one of methanol and gasoline.

32. (Currently Amended) A method for generating electrical energy using a fuel-cell system, comprising the steps of:

producing hydrogen from a raw material in a reforming process, a fuel-cell unit of the fuel-cell system being operable in accordance with the produced hydrogen;

oxidizing carbon monoxide into carbon dioxide after the reforming process and upstream of the fuel-cell unit; and

injecting water during the oxidizing step to supply oxygen to oxidize carbon monoxide into carbon dioxide.

33. (Currently Amended) A method for generating electrical energy using a fuel-cell system, comprising the steps of:

producing hydrogen from a raw material in a reforming process, a fuel-cell unit of the fuel-cell system being operable in accordance with the produced hydrogen;

oxidizing carbon monoxide into carbon dioxide after the reforming process and upstream of the fuel-cell unit; and

injecting water during the oxidizing step to supply oxygen to oxidize carbon monoxide into carbon dioxide;

wherein the fuel-cell system includes a drive system of a motor vehicle.

34. (Previously Presented) The method according to claim 32, wherein the water is injected as one of a vapor and an aerosol.

35. (Previously Presented) The method according to claim 32, further comprising the step of supplying compressed air to at least one of a process gas between a carbon monoxide oxidizing unit and the fuel-cell unit and a cathode of the fuel-cell unit.

36. (Previously Presented) The method according to claim 32, further comprising the steps of:

separating water from at least one of a cathode-exhaust stream of the fuel-cell unit and an anode-exhaust stream of the fuel-cell unit; and
supplying the separated water to the reforming process.

37. (Previously Presented) The method according to claim 32, further comprising the steps of:

burning an exhaust gas from an anode of the fuel-cell unit; and
supplying waste heat generated by the burning step to the reforming process.

38. (Currently Amended) A method for generating electrical energy using a fuel-cell system, comprising the steps of:

producing hydrogen from a raw material in a reforming process, a fuel-cell unit of the fuel-cell system being operable in accordance with the produced hydrogen;

oxidizing carbon monoxide into carbon dioxide after the reforming process and upstream of the fuel-cell unit;

injecting water during the oxidizing step to supply oxygen to oxidize carbon monoxide into carbon dioxide;

burning the raw material; and

supplying heat energy generated by the raw material burning step to the reforming process.

39. (Previously Presented) The method according to claim 32, wherein the raw material includes a hydrogen-containing substance.

40. (Previously Presented) The method according to claim 39, wherein the hydrogen-containing substance includes at least one of methanol and gasoline.

41. (New) The fuel-cell system according to claim 17, wherein the oxidation device is configured to convert carbon monoxide into carbon dioxide by a reaction with oxygen supplied by the water injected by the water-injection device.

42. (New) The method according to claim 32, wherein carbon monoxide is oxidized in the oxidizing step by a reaction with oxygen supplied by the water injected in the injecting step.